HP StorageWorks

Fabric OS 5.0.1 release notes

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About this document

This section identifies the audience of this release notes document and provides a high-level description of the information it contains.

Release notes overview

These release notes contain the following major sections:

- Product overview, page 4
- Documentation anomaly, page 5
- OS requirements, page 6
- Important notes, page 6
- Closed defects in Fabric OS 5.x, page 12

Intended audience

This document is intended for systems administrators and technicians who are responsible for installing, operating, and maintaining Fabric Operating System 5.0.1.

Accessing future product updates

HP strongly recommends that customers sign up online using the Subscriber's choice web site: http://www.hp.com/go/e-updates.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and firmware documentation updates, as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business support** and then **Storage** under Product Category.

Other product documentation

Documentation, including white papers and best practices documents, is available on the HP web site: http://www.hp.com/country/us/eng/prodserv/storage.html.

To access current Fabric OS 5.x documents:

1. Locate the **IT storage products** section of the web page.
2. Under **Networked storage**, click **SAN infrastructure**.
3. From the **SAN infrastructure** web page, locate the **SAN Infrastructure products** section.
4. Click **Fibre Channel Switches**.
5. Locate the **B-Series Fabric-Enterprise Class** section.

6. Click the appropriate switches to access Fabric OS 5.x documents.
7. Go to the **Product Information section**, located on the right side of the web page, and click **Technical documents**.
8. Follow the on-screen instructions to download the applicable documents.

HP StorageWorks Fabric OS 5.x master glossary

This document uses industry standard Storage Area Network (SAN) terminology. Some terms, however, are specific to Fabric OS 5.x. See the *HP StorageWorks Fabric OS 5.x master glossary* for a complete list of terms and definitions.

Access the master glossary from the HP StorageWorks SAN Switch Documentation for your switch. You may also access the master glossary from the HP web site using the procedure in "Other product documentation" on page 3.

Product overview

> 📝 **NOTE:**
>
> FICON is not supported on HP B-Series Fibre Channel switches. The FICON information in this document is included for reference only.

Supported switches

Fabric OS 5.0.1 supports the following HP StorageWorks switches and director:

- SAN Switch 2/8V
- SAN Switch 2/16V
- SAN Switch 2/16N
- SAN Switch 2/32
- SAN Switch 4/32
- Core Switch 2/64
- SAN Director 2/128

Firmware upgrades

HP recommends that you limit firmware upgrades to two or fewer release levels. For example, upgrading a switch from Fabric OS 4.1.0 to 5.0.1 requires a two-step process: first upgrading to 4.4.0 and then upgrading to 5.0.1.

Technical support

Contact your switch support supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information available:

- General information

  - Technical support contact number, if applicable
  - Switch model
  - Switch operating system version
  - Error numbers and messages received
  - Output from the `supportSave`
  - Detailed description of the problem and specific questions
  - Description of any troubleshooting steps already performed and results
- Switch serial number and corresponding bar code from the serial number label. This label is located on the various switches as follows:

  - 1 GB Switches: Nonport side of the chassis
  - SAN Switch 2/8V, SAN Switch 2/16V, and SAN Switch 2/32: Bottom of the chassis
  - SAN Switch 4/32: On the switch ID pull-out tab, located on the port side and on the inside of the chassis near the power supply (on the right when looking at the nonport side)
  - Core Switch 2/64 and SAN Director 2/128: Inside front of the chassis, on the wall to the left of the ports

- World wide name (WWN)

  - For the SAN Switch 2/8V, SAN Switch 2/16V, SAN Switch 2/32, SAN Switch 4/32, Core Switch 2/64, and SAN Director 2/128: Provide the license ID. Use the `licenseIDShow` command to display the license ID.
  - For all other HP StorageWorks switches: Provide the switch WWN. Use the `wwn` command to display the switch WWN.

Documentation anomaly

In the *HP StorageWorks SAN Switch installation guide*, PN A7393–90001, on page 41 there is an error in Figure 12, "Securing the inner rails to the 4/32 SAN Switch."

Figure 12 does not match the text in step 6 on page 39. Step 6 correctly instructs the user to secure the inner rails using the holes marked "16." However, Figure 12 shows the inner rails attached using screw holes marked "8."

OS requirements

Table 1 summarizes the versions of HP software supported in this release. These are the earliest software versions that interoperate. HP recommends that you use the latest software versions to get the greatest benefit from your SAN.

Table 1 Operating system requirements

Switch/software	General compatibility version	With Secure Fabric OS enabled	Recommended software version
1 Gb switches	2.6.1 or later	2.6.1 or later	2.6.2d
SAN Switches 2/8–EL, 2/16	3.1.0 or later	3.1.2 or later	3.3.0a
SAN Switches 2/8V, 2/16V, 2/32, Core Switch 2/64, SAN Director 2/128	4.1.0 or later	4.2.0 or later	5.0.1 or later
SAN Switch 4/32	4.4.0b or later	4.4.0b or later	5.0.1 or later
Fabric Manager	3.0.2c or later	3.0.2c or later	4.4.0 or later

Important notes

This section provides information you should be aware of when running Fabric OS 5.0.1.

HP no longer includes a PKI certificate as part of the installed Secure Fabric OS. If you want to activate Secure Fabric OS on a supported director or switch, you must contact HP to obtain a PKI certificate.

See the *HP StorageWorks Secure Fabric OS administrator guide* for instructions on obtaining certificates.

New features

This section discusses the major new features incorporated in Fabric OS 5.0.1.

Chassis configuration options

With the Fabric OS 4.4.0 release, a new command, `aptPolicy`, allowed you to configure which egress port is selected for a frame, based on a particular policy:

- Port-based path selection: Paths are chosen based on ingress port and destination only, including user-configured paths.
- Device-based path selection: Paths are chosen based on SID and DID.
- Exchange-based path selection: Paths are chosen based on SID, DID, and OXID.

- Device-based path selection: Paths are chosen based on SID and DID.

- Exchange-based path selection: Paths are chosen based on SID, DID, and OXID.

For all other modes, you must use the port-based path selection, where paths are chosen based on ingress port and destination only, including user-configured paths. Table 2 shows the chassis options.

Table 2 HP StorageWorks chassis option descriptions

Op-tion	Number of domains: domains	Routing module	Supported CPs	Supported port blades	Implications and notes
1	1: 128	CER	CP2 or CP4	FC2–16	CP4 is faulted if inserted into a D2 chassis
2	2: 64/64	CER/CER	CP2 only	FC2–16 only	None
3	2: 64/64	CER/XYR	CP2 only	Left side: FC2–16 Right side: 12K	Same support as Fabric OS 4.4.
4	2: 64/64	XYR/CER	CP2 only	Left side: 12K Right side: FC2–16	Same support as Fabric OS 4.4.
5	1: 256	RTE	CP4 only	N/A	CP4 is faulted if inserted into a D2 chassis.

Key to Table 2:

- CER = Core Edge Routing; a port-based routing scheme; the same as the routing option supported in Fabric OS 4.2 and 4.4.
- XYR = X-Y Linear Routing; the routing scheme used on the Core Switch 2/64.
- RTE = Advanced Routing; an exchange-based (the default) or a device-based routing scheme.
- CP2 = SAN Director 2/128 CP blade
- FC2–16 = 2 Gb, 16-port blade
- 12K = Core Switch 2/64 port blade (2 Gb, 16–port)

Enhanced RAS log messages

New with Fabric OS 5.0.1 is a class of RAS log messages that records when zoning changes are made through Advanced Web Tools or the command line interface (CLI) when AUDIT is enabled. Note that occasional redundant entries are possible, due to an extra HTTP entry when zoning changes are performed through the CLI.

Scalability

Scaling the SAN is accomplished in two ways:

- Single-switch scalability, which is the ability to handle up to 256 switch ports with some number of directly attached Nx_Port types or the ability to operate effectively in a multiple-switch environment
- Fabric scalability, which is the maximum number of ports and domains available fabric-wide

Fabric OS 5.0.1 supports the same fabric scalability as Fabric OS 4.4: 2650 ports with 50 domains.

Problem determination

Fabric OS 5.0.1 features the `FcPing` command, which provides the ability to check Fibre Channel connectivity between any two nodes in a fabric.

Security-related enhancement

A new role-based control function, the switch administrator, allows an administrator to control a switch, but not to modify any fabric-wide configuration (security, zoning, or user configuration); see the `userconfig` command in the *HP StorageWorks Fabric OS 5.x command reference guide*.

Merging zones

Before linking two switches, it is important to know the zone database limit of adjacent switches. For details, see the "Merging zones" section in the *HP StorageWorks Fabric OS 5.x administrator guide*.

Advanced Web Tools

For instructions on installing Mozilla 1.6 on Solaris 2.8 and Solaris 2.9 platforms, see the following web site: http://www.mozilla.org/releases/mozilla1.6/installation.html.

The Mozilla browser does not support the Switch Admin module properly in Fabric OS 2.6.x. In Fabric OS 2.6.2, a warning message is displayed. For other 2.6.x versions, no warning message is displayed. You can prevent this issue from occurring by using Netscape 4.7.7 or later browser.

The added supported browsers, operating systems, and Java™ Plug-ins introduce the issues described in Table 3 when using mixed Fabric OS versions in Advanced Web Tools 5.x. Table 3 includes workarounds for each issue.

Table 3 Advanced Web Tools compatibility issues

Launch switch environment	Issue
Firmware: Fabric OS 3.1.0+, 4.1.0+, or 5.0.1+ **Operating system:** Any supported OS with a supported browser **Browser:** Any supported browser on a supported OS	**Issue:** When viewing the topology from Advanced Web Tools, if your initial login was a version 3.1.0+, 4.1.0+, or 5.0.1+ switch and you view the topology from a switch with a previous version of Fabric OS, there is no print function available in the Fabric Topology window. Advanced Web Tools versions 3.1.0+, 4.1.0+, and 5.0.1+ include a Print button in the Fabric Topology window; earlier versions do not. **Workaround:** If the Fabric Topology window does not include a Print button, right-click anywhere inside the window and select **Print** from the pop-up menu.
Firmware: Version earlier than Fabric OS 2.6.2, 3.1.2, or 4.2.0a **Operating system:** Any supported OS with a supported browser **Browser:** Any supported browser on a supported OS	**Issue:** If you try to access a switch running firmware versions earlier than Fabric OS 2.6.2, 3.1.2, or 4.2.0 from the launch switch, Switch Explorer displays a null pointer exception, and the SwitchInfo applet does not appear. Switch Explorer does not work properly with switches running the latest firmware. **Workaround:** Use a launch switch running Fabric OS 2.6.2, 3.1.2, 4.2.0, or later to access the switch.
Firmware: Version earlier than Fabric OS 2.6.2, 3.1.2, or 4.2.0a **Operating system:** Any supported OS with a supported browser **Browser:** Any supported browser on a supported OS	**Issue:** If you try to perform end-to-end monitoring (Advanced Performance Monitoring) on a local switch with a Fabric OS earlier than 4.4.0, the SAN Switch 4/32 is displayed as a 16-port switch. **Workaround:** For a SAN Switch 4/32, use a launch switch running Fabric OS 4.4.0 or later to perform end-to-end monitoring on the switch.
Firmware: Version earlier than Fabric OS 4.4.0 **Operating system:** Any supported OS with a supported browser **Browser:** Any supported browser on a supported OS	**Issue:** If you try to perform zoning on a local switch with a Fabric OS version earlier than 4.4.0, the SAN Switch 4/32 is displayed as a 16-port switch. **Workaround:** If you are running Secure Fabric OS, select a switch running Fabric OS 4.4.0 or later as the primary FCS switch. If you are not running Secure Fabric OS, use a launch switch running Fabric OS 4.4.0 or later to perform zoning on the switch.

Launch switch environment	Issue
Firmware: Version earlier than Fabric OS 2.6.2, 3.1.2, or 4.2.0 **Operating system:** Solaris **Browser:** Netscape	**Issue:** Any switches running Fabric OS 2.6.2, 3.1.2, 4.2.0, or later, are unsupported through Netscape. **Workaround:** The Netscape browser is not supported by Advanced Web Tools for switches running Fabric OS 2.6.2, 3.1.2, 4.2.0, or later. Use Mozilla browser version 1.6 to manage all your switches from a Solaris OS.
Firmware: Version earlier than Fabric OS 2.6.2, 3.0.x, or 4.0.x **Operating system:** Windows® **Browser:** Internet Explorer	**Issue:** If you try to run Fabric View with a large fabric, the browser might crash. **Workaround:** Use a launch switch that runs Fabric OS 2.6.1, 3.0.x, 4.0.x, or later, so that you can use Switch Explorer, rather than Fabric View.
Firmware: Fabric OS 5.0.1+ **Operating system:** Any supported OS with a supported browser **Browser:** Internet Explorer and Mozilla	**Issue:** If you upgrade from Fabric OS 4.x to 5.0.1, you must upgrade your Java plug-in version to 1.4.2_06 from any earlier version installed on your system. **Workaround:** For Internet Explorer, before launching Advanced Web Tools, check your Java plug-in version. If you have a version earlier than 1.4.2_06, you must uninstall it. When you launch Advanced Web Tools and you see a warning about a missing plug-in, follow the prompts. This procedure ensures that the correct plug-in version is installed. For Mozilla, follow the Mozilla Java plug-in installation instructions to install Java 1.4.2_06.

Other notes

Table 4 provides important information regarding Fabric OS 5.0.1.

Table 4 Fabric OS 5.0.1 important information

Fabric OS area	Description
Advanced Performance Monitor	Adding the Advanced Performance Monitor (`perfAddUserMonitor`) without zoning enabled at the same time, strips all frame traffic. The only frames that can go through are those that match the definitions in the `perfAddUserMonitor` command; in most cases, this is a very narrow definition. The result is that almost all traffic is blocked. Add the Advanced Performance Monitor only when zoning is also enabled.

Fabric OS area	Description
Diagnostics: `backporttest`	Backport test passes only in: • A pure SAN Director 2/128 system • A SAN Director 2/128 system with no electron blades and under option 5. For all other configurations, use the minicycle test instead.
Diagnostics: `spinsilk`	Pure SAN Director 2/128 system (only CP2 & FC-16): Passes For all other configurations, use the minicycle test instead.
Nondefault operands	**IMPORTANT:** HP recommends the use of nondefault operands for diagnostic commands for advanced users and technical support only.
Upgrade	Fabric OS 5.0.0 is superseded by Fabric OS 5.0.1; you are strongly encouraged to upgrade to 5.0.1. Note that earlier releases of version 5.0.0 might not support hot code activation. Therefore, when you upgrade to version 5.0.1, you must reboot the switch for the new version to take effect.
Upgrading and downgrading	When considering an upgrade to a later Fabric OS release, save the zone database configuration immediately following the upgrade. Changes to the zoning database can then be made. If you are considering downgrading to an earlier Fabric OS release, remember to restore the saved zoning database configuration prior to the downgrade.
Upgrading Fabric OS 4.2.0 to 5.0.1	The SW and FA traps in pre-Fabric OS 4.4 code were turned on and off as a group and it was not possible to set individual SW or FA traps. In version 4.4, the ability to turn traps on and off individually was added. That means that individual traps need to be turned on explicitly after the corresponding trap group is turned on. After the upgrade from Fabric OS 4.2.0, individual traps are turned off by default, even if the corresponding trap group was turned on before the upgrade. Therefore, if you have previously been monitoring these traps, you need to use either the `snmpmibcapset` or the newer `snmpconfig` command to turn the desired traps on individually.
Zoning	With AUDIT logging enabled, while performing zoning changes via CLI, an additional audit log from HTTP may also appear along with the audit logs from zoning. This message does not always appear; when it does, it represents redundant reporting by the CAL layer.

Closed defects in Fabric OS 5.0.1

Table 5 lists issues that have been closed since the last Fabric OS release.

Table 5 Closed issues in release 5.0.1

Summary
JNI 6410 (version 3.1 driver on NT) as F_Port fails to come up on SAN Switch 2/32 and Core Switch 2/64.
Systemtest failure: `Failed to go active after initialization.`
Able to view defined zoning information through web browser and retrieve the defined zoning database without any authentication.
OS-Gen: Public device comes up as a private device on one switch port.
Time stamp in Fabric Events does not contain year.
ZN-Gen: After hafailover (triggered by Active CP panic), not all slots on logical sw0 are initialized.
Scalability RFE: We need to keep key Fabric OS daemons from dying or ensure they appear to be "never dead."
Hafailover sometimes causes targets to be lost.
Version 4.0.2rc1: `PortStatsReset` is not resetting all counts on Port Stats obtained through API commands.
[USABILITY] WT — 9.30. Various problems occur when changing the CP IPs from the Network tab.
WT — 9.16. There is no error message when an invalid license is removed or for a valid license that is already removed.
User should not be asked to enter old password if `passwd -o` "root" is executed.
In a 4x12 fabric, Windows 2000 hosts connected to IBM SHARK lose their assigned LUNs after a fabric reconfiguration.
No SNMP trap is received when a fan is removed.
System remains in redundant state after the pdm daemon is killed.
During the testing of MS-related commands, msd got signal 11 core dumped.
The following inconsistent message occurred between the root user and the admin user: `unmatch reenter new passwords`.
Kernel panic with large zone database, which exceeds 128 K limit.

Summary
Trackchanges indicates `successful login`, even if the user is rejected. If the maximum number of users has been reached and a user attempts to log in with correct user name and password, the user is rejected for exceeding the maximum number of users.
A 2xxx fabric does not segment correctly when an oversized zoning database is propagated from a SAN Switch 2/32.
In a 16-switch (4x12) fabric, traffic running over the weekend (approximately 48 hours) with no other activity, the blade had a BLADE-REG_FAULT problem. Blade also failed HW test.
Security Admin returns Error -65 after removing and adding members and activating FCS Policy. In a large fabric containing over 26 switches, an error is returned when using the Fabric Access API to remove multiple FCS members without first performing a save operation.
Switch attribute UpTime returns incorrect value on 4.1.x system through API.
NOT PID: Port swap: Performance monitor database was not moved when ports were swapped.
PID: Canvas configurations saved on the switch are not converted when changing PID format.
Boot prom login requires only the first eight characters of the password.
EV_RSCN contains invalid fabric OID when the `switchdisable` command mars the switch to cause a fabric reconfiguration.
`ObjClient.enumerateInstances` using a specific fabric causes an exception on both server and client.
In a Dense Wave-Division Multiplexing (DWDM) environment, a DWDM failover in the gateway devices can cause ports to go offline and fabric reconfiguration. The ports that go offline are the ones directly connected to DWDM equipment that failed over.
Console shows `Warning MSFICON-IDID, 3, Effective Insistent domain ID for the fabric changed from OFF to ON` after `switchdisable`.
EM and FW statuses are not consistent for `fanShow`, `tempShow`, `sensorShow`, and `psShow` commands.
Simultaneous reboot and fwdl failed at `fab_ha.c` line 3570.
Scalability: switch may reconfigure if two adjacent SAN Switch 2/32 switches do hot code loading (HCL) at the same time.
Temporary Internet files may allow a user to bypass Advanced Web Tools login to perform administrative functions on a switch.

Summary
With a version 4.1.2c switch as proxy, API fails to Add or Remove the license on all target switches, except the version 4.1.2c target.
GPL payload from FCR is not transferred to API.
Fabric OS CLI does not validate data for port naming and lets the user rename a port as, for example, #%$.
Switch Zone transaction state gets locked and not aborted after several zoning operations.
With a Fabric OS 4.1.1d switch as proxy, API fails to add or remove a license on all target switches except the 4.1.1d target.
Encoding errors denoted by Enc_out are increasing on unused ports.
CP fails to boot with no BOOTENV variables. The output of PRINTENV shows that all BOOTENV variables are missing.
GAPNL does not work from RPC call.
Help (man) pages do not match the new command usage.
SAN Switch 2/32 panics during fastboot script.
CP reboots repeatedly due to a corrupted SEEPROM.
The Ethernet is unavailable with 10 Mbps configuration on the SAN Director 2/128.
One of the E_Ports comes up in unknown state after multiple iterations of severe fault injections.
A typo in supportftp causes errorlog flood, due to FTP transfer errors.
Solaris Fabric Manager server does not update for 1.5 hours after segment/merge.
Changing from one domain to two domains on a SAN Director 2/128 in secure mode leaves logical switch 1 in secure mode.
Port cam entry is not set up properly.
The Remove/Replace Offline Devices wizard does not show Offline Fabric Assist (FA) host devices.
The port number is not included when Fabric Manager event log shows marginal port warning from Fabric Watch.
Commands that display physical user port number need to be updated to display the area number.
Simultaneously inserting an HP StorageWorks 24 K port blade and the Active CP that was pulled out before the LED is turned off causes the port blade to be reported as faulty.

Summary
SNMP v3 clients are not able to receive SNMP v3 traps after rebooting the switch, unless USM entries are deleted and re-created at the SNMP v3 clients.
A route was not set up for an F_Port after issuing a `switchCfgSpeed` 2/0 command on a single-domain SAN Director 2/128.
Repeated fastboot causes a 4-port trunk between a SAN Director 2/128 and a Core Switch 2/64 to split off into two trunks: a 3-port trunk and a single-port trunk.
During stress testing, where switches are going through fastboot overnight in a large fabric, one of the SAN Director 2/128s encounters a panic condition and reboots.
When querying the USM MIB, the index on the USM MIB is changed to the CP IP address instead of the switch IP address.
The SwitchAdmin Switch tab does not display the chassis name.
Fabric OS 4.2.x environment variables are not correctly set up.
The `swEventRepeatCount` variables show the event count as 1 for all events, even though some events are repeated. Some non-repeated event numbers are missing on SNMP query on a SAN Switch 4/32 and SAN Director 2/128.
Delayed RSCN from the switch when FCP probing failed.
Zone propagation in a large fabric, performed using automation script, failed with the error message `Commit zone DB larger than supported`.
A CLI user was not logged off when the account was disabled from Advanced Web Tools user admin.
The user interface for handling incorrect string lengths needs to be improved. The `switchname` command needs improvement in notifying users on error conditions seen with illegal character and supplied string length.
The device name field in the Advanced Web Tools name server is not populated for devices not directly connected to the launch switch.
After multiple iterations of `switchdisable`, `switchenable`, and CP failover (by resetting the microswitch), a slot may become faulty.
Disabling E_Port formation using the `portcfgeport` CLI command does not prevent an ISL from forming with an MP Router.
A `firmwaredownload -s`, without a reboot, followed by a `firmwaredownload` that gets interrupted, causes `badrootdev`.
The alert message, displayed after removing the performance monitoring license and attempting to load a saved graph, does not report the reason for failure as a missing license.

Summary
In a Windows Internet Explorer environment, after clicking a switch that does not have the web server running and then clicking any other switch, a switch view is not produced.
In large configurations (77 domains, in this case), if the user is enabling and disabling repeatedly, the switch may panic.
After a switch reboots, the fabric tree collapses with each poll, even though there are switches in the fabric.
Continuous removal and insertion of a SAN Director 2/128 standby CP before the LED turns off, causes I/O disruption on all the ports connected to devices.
Two critical errors occur when a SAN Director 2/128 standby CP is removed quickly without reinserting the blade.
Error and warning messages are displayed when an active CP is removed from a SAN Director 2/128 before the LED goes off (with POST enabled).
When a SAN Director 2/128's active CP is removed before the LED goes off and is then reinserted with POST disabled, a warning message is issued on the active CP. The blade in slot 7 is inconsistent with the hardware setting and slot 7 gets reinitialized.
When a SAN Director 2/128's active CP is removed before the LED goes off and is then reinitialized with POST enabled, after failover, a warning message is issued against slots 9 and 10 on the active CP.
When a SAN Director 2/128's active CP is removed before the LED goes off and is then reinserted with POST disabled, after failover, two critical and two warning messages are issued on the active CP.
In switches running Fabric OS 4.x (SAN Switch 2/8V, SAN Switch 2/16V, SAN Switch 2/32, Core Switch 2/64, and SAN Director 2/128), the blade faults when it encounters BLOOM parity errors in the SRAMs R2T, TFR, STATS, SMI, FLT, and PHAN.
In a large configuration consisting of 30 fabrics interconnected by an FC Router, one of the slots in a SAN Director 2/128 is faulted.
An hafailover during zone propagation in a large fabric causes some E_Ports to get segmented, due to a zone conflict.
In a FICON environment, host/target initialization intermittently fails to complete correctly after a zoning change.
When a user adds a graph to an existing canvas, all the ports are selected by default, instead of allowing individual port selection for snapshot graphs.
Cannot configure temperature threshold alarm actions and policy on the SAN Switch 2/16V.

Summary
Cannot enable port after disabling it in the Web Tools Switch Admin Ports tab when FICON Management Server mode is enabled and active = save mode is set.
When all switches are rebooted simultaneously, one of the SAN Switch 2/16Vs experienced a panic.
If a large number of raslog messages are generated, it is not possible to cause the raslog to core dump.
On large fabrics, the retrieving end-to-end monitors using the API library can fail when the PerfMon internal cache is not populated. In most cases, this occurs only in the first attempt to retrieve monitors.
Error statistics occur on ports that have not connected with hosts.
The `portName` command does not agree with its man page. When issued without operands, the user gets an error message instead of the documented behavior.
The system panics after a `configdownload` of the configuration file with PID format = 0 (negative test).
Performance monitor configuration data is lost during a CF data read and write stress test. One of the filter monitor's aliases is lost after repeatedly executing `perfcfgrestore`; `perfcfgclear`; `perfcfgsave` for 30 minutes.
With the port in AN mode, the port does not come up if the cable is pulled and reinserted multiple times. Usually seen with one of the third-party arrays.
The current behavior does not interpret or represent long-distance data correctly; there is no CLI match.
When the Synchronize Services or Refresh button is pressed, the Service tab window within the HA Admin window becomes blank when either request is completed.
SAN Director 2/128 fails to initialize Fabric Watch during `firmwaredownload` when a defective fan is present.
SAN Switch 4/32 echoes back link commands.
For fabric configurations that include an MP Router, executing a `cfgenable` or `cfgdisable` command from a SAN Director 2/128 does not propagate the zoning configuration to all switches.
Boot PROM parameters changed after booting into single-user mode.
The Cancel button appears in the final step of the Remove Office Devices dialog. It is not required and does not function as a Cancel button.
On the SAN Switch 4/32, a Fibre Channel trace shows a number of NOS primitives echoed back by the switch port between SN completion and the start of LPSM.

Summary
When PID format is set to 2 and FICON mode is enabled, the error message that is displayed indicates unknown error.
The response to the command `MS_GSWITCH_NG` contains no payload.
During HA failover or system startup, the following message appears on the console intermittently: `IOCTL not allowed: cmd 0x4004d202, pid 724 (sebd).`
Edge switch panic occurs in NS during switch reboot of core switches.
A panic occurs on the SAN Switch 2/8V and 2/16V if they perform simultaneous zoning `cfgdisable` operations on multiple switches.
We need another failure message when attempting to change the password of a non-default admin account.
The `agtcfgset` CLI command accepts subnets in incorrect format in the Access host subnet area.
Core Switch 2/64 fails after zoning changes are made through API scripting.
After closing a SID/DID graph, it is still shown as open from the switch console.
During a heavy load, a Fabric Watch alarm user sees `firmwaredownload failed` message.
If an FL_Port is forced into SW mode, injected LIP during the LIFA, LIPA, LIHA, LISA, LILP, or LIRP is not recognized by the switch.
In a PID format 2 configuration, the host lost communication with the device when another host rebooted on a different port.
If a voltage margin command is executed, CF flash tests may fail.
The switch port displays erroneous traffic data when HBA/PC is in a non-operative state.
CF usage is at 91% due to zone in panic loop (assert). An enhancement is needed on the restrict process core dump numbers.
A single corrupted idle sent by a storage device, despite subsequent good idles, causes the switch to take the port offline by sending a not operational primitive sequence (NOS).
SAN Switch 2/32 panics, due to a HW failure after a `firmwaredownload`.
The Advanced Web Tools FabricEvents window does not keep the expanded dialog box after it is minimized and then maximized.
A part of the text is lost when a graph is printed under Advanced Web Tools.
Link reset does not restore login BB credits.
Loss of sync in OL2 states causes link trouble on the server side.

Summary
The time stamp in the Advanced Web Tools Zone dialog box is not the same as the time on the switch.
After code upgrade, the message `FCPH 0:   pt20 no sequence open on the tx queue sw0:` fills up the syslog.
The Software Watchdog (SWD) can cause a failover or reboot, due to an FSPF panic.
The Advanced Web Tools Name Server applet display is empty if an HBA attempts to register a Host Name attribute.
The RPA and RPRT are not forwarded to Fabric OS 5.0 and later.
Any user level can pass UNIX® commands through an ssh connection. The restricted shell is not enforced.
Using `cfgEnable` to enable a new zoning configuration that exceeds the CAM limit on a port group, causes traffic to be stopped.
An out-of-memory condition occurs (all slots are full from `kmalloc_wrapper`) when running POST2 on a SAN Switch 4/32.
SNMP trap problem with CP blades on the SAN Director 2/128.
SAN Switch 2/8V or SAN Switch 2/16V with Fabric OS 4.2.2a reboots continuously within two minutes, if the switch gets into a severe over-temperature condition.
The `configdownload` command accepts invalid values and is thus not able to telnet to the switch and execute other CLI commands.
Path is lost during storage virtualization device nodes reboot with the SAN Switch 4/32.
Fibre Channel switch does not boot up to Fabric OS.
Change the message `Switch reboot reason unknown` to `Standby/(active) CP ##reboot reason unknown`.
SAN Switch 2/32 slot 0 faulted and became `No ports found in the system!!!` during voltage variation.
The following message was issued during hot code load: `Switch bring-up timed out`.
The Software Watchdog causes an unscheduled automatic failover or reboot on HP StorageWorks platforms running Fabric OS 4.4.x (after a period of 49 days).
A SAN Switch 4/32 connected to an Emulex 9820 running in target mode becomes a G_Port when performing port disable/enable repeatedly.
Upgrading to Fabric OS 4.4.x results in a temporary Name Server/Zoning Service incompatibility, which can cause traffic to stop in large fabrics.

Summary
When the `hafailover` command is executed, the reboot message is displayed.
The `configupload` command does not save the FICON CUP data on Fabric OS 4.4.0x only.
When the system power-cycles with POST enabled, the following error is displayed: `CRITICAL, Silkworm24000, DIAG-PORTSTOPPEDD minicycle:ExtLineLB, 0 nMegs,Pt6/-1(36) Ch4/4 No Longer Transmitting, FTX Counter Stuck at 2, Err## 140082E 0624, iobul.c, line:  640.`
NS does not respond to many NS registrations and is discarded with a timeout.
A `diagsetburnin` test fails and the switch is incorrectly set to `Faulty`.
After a `firmwaredownload -sf` on a Core Switch 2/64, multiple occurrences of the following message were generated: `Calling cal_CreateBladeObjectKeys on 43100000.`
MS platform database was corrupted following an RCSD crash and Software Watchdog reboot of the switch.
BL_1013 error message received; indicates excessive interrupts during cable pull.
Advanced Web Tools Switch Admin view does not display the trunk group information properly for all trunk assignments.
Disabling an active zone by the `cfgDisable` command disrupts Fibre Channel I/O.
Frequent repeated SNMP `get`s over an extended period of time eventually causes an out-of-memory panic and switch reboot.
Cannot create a DCC_POLICY using the asterisk (*) to include port numbers greater than 127.
Fan failure `Env Fan 1`, is below the low boundary (low = 2000, high = 3400).
The `configdownload` command fails with `ficulmport failed with rc=2`.
MAXPERT AG and SAN Switch 2/8V panic while OV-SAM tries to discover them.
Auto FTP fails if the root directory is set as the remote directory.
After initial fix, user gets contradictory messages when requesting a switch reboot in Advanced Web Tools.
FabricEvents does not have the same behavior as SwitchEvents in Advanced Web Tools.

Summary
ConnUnitPortFCid MIB changed format in Fabric OS 4.4.0x.
The swFCPortLinkState is not in sync with portdisable/portenable on Fabric OS 4.4.x.
The message `Zoning transaction aborted` is logged as an error message caused by third-party application Call Home.
SAN Switch 2/32 reports a Fabric Watch error. Fabric Watch is initialized before the environment monitor daemon (emd) is fully ready.
The diagnostics command cannot be executed on SAN Switch 4/32.
Native Linux® compilation failed.
API returns an error intermittently when trying to establish a session with the proxy switch when Fabric Manager tries to retrieve Port Stats and end-to-end monitoring.
The `fdmicacheshow` command "verion" does not list the correct Fabric OS on attached switches with different Fabric OSs.
The `systemverification` command fails, preventing an admin user from running diagnostics on a switch.
Cannot establish a long-distance ISL between XPath OS 7.4.0 and Fabric OS 5.0.0_beta2_bld01.
Sixteen diagnostic commands do not work on the SAN Switch 4/32.
PM display at 1 Gb when 4 Gb SFP was inserted.
A bad RSCN from a third-party switch caused the name server to assert and the switch to panic.
The `spinfab` diagnostic falsely reports an error after an hour or so of operation.
A common access layer daemon (CALD) crash generated core dump files and switch panic.
The value of the port of 4 Gb SFP exceeds 100% in SwitchPercent.
Supportability enhancements need to be made to Fabric OS 4.4.0d and future releases.
In PID format 2 (extended-edge PID format), we need to extend the support beyond 127 ports.
The fspfd experiences ASSERT while processing a link state update record (LSU) during fabric merge in interopmode.
The `./install_verify` fails on verifying the PROM RPM package.
I/O stops during hareboot of HCL.

Summary
The `swFabricWatchTrap` has #SUMMARY and #ARGUMENTS out of sync with OBJECTS order.
Advanced Web Tools under Fabric Manager displays an incorrect SCSI inquiry name for the iSCSI initiator and cannot see all devices when the launch switch is at Fabric OS 4.4.x.
During firmware upgrade from Fabric OS 4.0.2x to 4.4.0x, zone configuration is lost if the switch is rebooted without any prior zone changes.
Both CPs reboot at the same time after a blade replacement.
Without a Fabric Watch license, SNMPD panics during MIB walk.
In a fabric with mixed firmware (5.0.0, 4.4.0c, 4.4.0d_rc1), `nsallshow` may be out of sync.